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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------------|------------------|
| 10/777,191 | 02/13/2004 | George Neuman | 3691-641 | 7525 |
| 23117 | 7590 | 12/01/2004 | EXAMINER | |
| NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714 | | | BLACKWELL RUDASIL, GWENDOLYN A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1775 | |

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,191

Applicant(s)

NEUMAN ET AL.

Examiner

Gwendolyn A. Blackwell-Rudasill

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-64 and 72-75 is/are pending in the application.
- 4a) Of the above claim(s) 73-75 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-64 and 72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 43-64 and 72-75 are currently pending and examined on the merits. Claims 1-42 and 65-71 are canceled.

Election/Restrictions

2. Newly submitted claims 73-75 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Newly submitted claims 73-75 are drawn to a method of making, whereas the invention that has received an action on the merits is drawn to an article as well as the two inventions having different classifications. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 73-75 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 43-64 and 72 are rejected under 35 U.S.C. 102(a) as being anticipated by International Patent Application Publication no. 01/21540, WO '540.

Regarding claims 43-64 and 72

WO '540 disclose a glazing comprised of a transparent substrate with a stack of thin layers acting on solar radiation wherein the functional layer comprises a metal layer of Nb, Ta, or Zr, or said metal nitride, (abstract). The functional layer has a thickness ranging from 5-50 nm (50-500 Å), the overlayer a thickness ranging between 5-70 nm (50-700 Å), and the sublayer a thickness between 5-120 nm (50-1200 Å), (page 9, lines 5-22). The use of niobium nitride as the functional layer is of particular interest due to niobium nitride being chemically very stable, (page 4, lines 31-33). A preferred embodiment consists of a functional layer of niobium nitride with an over layer and a sublayer of silicon nitride, wherein the silicon nitride layer can also contain up to 10 wt% of aluminum, (pages 7-8, lines 31-35 and page 10, lines 3-6). The ΔE_G^* value after heat treatment is of less than 3, especially less than 2, (page 10, lines 7-16). Example 6 has the layer structure as follows, (page 13, lines 10-16):

glass/Si₃N₄ (10 nm/100 Å)/NbN (10 nm/100 Å)/ Si₃N₄ (15 nm/150 Å).

Example 9 has the following layer structure, (page 19, lines 14-20):

glass/Si₃N₄ (10 nm/100 Å)/SiO₂ (40 nm/400 Å)/NbN /Si₃N₄ (15 nm/150 Å)

wherein the thickness of the NbN layer is adjusted to obtain a particular light transmission.

Example 10 has the following layer structure:

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glass/Si₃N₄ (10 nm/100 Å)/Ta (7 nm/70 Å)/ Si₃N₄ (20 nm/200 Å)

which has a Δb^*_G value of 0.2 after heat treatment. Although Example 10 uses Ta as the functional layer, it is further disclosed that tantalum nitride provides the same advantages as using Ta, (page 20, lines 10-20).

WO '540 also disclose that the glazing can be a monolithic glazing or an insulating glazing of the type used in a double glazing, wherein the glazing has a light transmittance of 5-55%, (page 11, lines 3-17).

Regarding claims 43-52 and 55-64

When the structure recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent. *MPEP 2112.01*. Because the prior art exemplifies the applicant's claimed layer structure, the claimed physical properties relating to its chemical durability, transmissive Δa^* value, sheet resistance, pinhole diameter, and hemispherical emissivity are inherently present in the prior art. Absent an evidentiary showing to the contrary, the addition of the claimed physical properties to the claim language fails to provide patentable distinction over the prior art of record.

Regarding claim 53

Claim 53 is a product by process claim wherein the patentability of the product does not depend on its method of production. "If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *See MPEP 2113*. Absent an evidentiary showing to

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the contrary, the process limitations within claim 53 does not provide patentable distinction between the claimed invention and the prior art of record.

Response to Arguments

5. The obvious type double patenting rejections have been withdrawn in light of Applicant's amendment.

6. Applicant's arguments, see pages 9-10, filed September 22, 2004, with respect to claims 43-64 have been fully considered and are persuasive. The 35 USC 102(a) rejection of claims 43-64 has been withdrawn.

7. Applicant's arguments filed September 22, 2004 have been fully considered but they are not persuasive with regards to WO '540.

8. Applicant contends that WO '540 fails to disclose or suggest that the coated article is chemically durable and shows no discoloration or visible peeling after a HCl test.

This is not persuasive as Applicant has not demonstrated by objective evidence to the contrary that the coated article disclosed in WO '540 would not provide the same chemical durability as Applicant's coated article.

9. Applicant also contends that the WO '540 coated article would not be inherently chemically durable because there is no coating in WO '540 "even remotely similar to any example coating described in the instant specification", (Response, page 8, last paragraph).

This is not persuasive as Applicant is setting forth arguments that are not commensurate with the claims. Examples in the specification are not reflected in the claims.

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Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn A. Blackwell-Rudasill whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday, 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gbr

Gwendolyn A. Blackwell-Rudasill
Examiner
Art Unit 1775



JENNIFER MCNEIL
PRIMARY EXAMINER